

# Work Order ID 58183

April 27, 2010 1:42:55 PM



Page 1

Item ID: D3278-1

Accept



Setup Start



Revision ID:

Item Name: Support

Stop



Start Date: 27/04/2010 Start Qty: 60.00



Cust Item ID:

Required Date: 04/05/2010 Req'd Qty: 60.00

Customer:

Reference:

Approvals:

Process Plan: *PL*

Date: *10-4-27*

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D3278

Rev C

100



Bandsaw

Jeaspa Bandsaw

BAND SAW

Memo

Cut blank: 2.00" x 1.00" x 2.550" long

0.00

0.00

*amt 10/04/29*

*60 0*

110



HAAS 1

HAAS CNC vertical machine #1

HAAS CNC VERTICAL MACHINING #1

Memo

1- Machine as per Folio FA405 and Dwg D3278-2- Deburr and Tumble Identify as D3278-1

0.00

0.00

*amt 10/03/05*

*sf 10/05/01*

*60 23*

*Ph-7*

120



QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

0.00

0.00

*sf 10/05/01*

*60 23*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3278-1 PAR #: \_\_\_\_\_ Fault Category: machining NCR: Yes No DQA: Yes Date: 10/05/05  
 Resolution: Scrap Disposition: Scrap QA: N/C Closed: Yes Date: 10/05/07






NCR: 58183		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
10/5/04	#110	Found Qty 23 parts that have the dia of .119 <sup>+0.005</sup> / <sub>-0.004</sub> measuring .102 - .111". R.L. Lack of attention. Went	<i>[Signature]</i>	Scrap & destroy all 23. and replace	<i>[Signature]</i> 10/05/04	<i>[Signature]</i> 10/05/05	<i>[Signature]</i>	<i>[Signature]</i>
		check his Part as they are machine	<i>[Signature]</i>	Inspect employee's measuring tool to ensure it is calibrated.  Lead hand to inform & restrain employee, to correctly measure & spot check (sample) the parts as they come off the machine.	<i>[Signature]</i> 10-05-04		<i>[Signature]</i>	<i>[Signature]</i>



NOTE: Date & initial all entries




# Work Order ID 58183

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Item ID:	D3278-1	Accept		Setup	Start	
Revision ID:						
Item Name:	Support				Stop	
Start Date:	27/04/2010	Start Qty: 60.00		Cust Item ID:		
Required Date:	04/05/2010	Req'd Qty: 60.00		Customer:		
Reference:						

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	
	QC:	Date:	SPC (Y/N):	Date:		Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130  QC Quality Control	QC8- Inspect parts - second check  Memo	0.00  0.00				60	23		
140  HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1  Memo	0.00  0.00				60	BR	10-5-5.	
150  Powdercoat Powder Coating	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum 11/14207 Memo START TIME: 9:15am 9:45am FINISH TIME: 320°F	0.00  0.00				60	8		

MWF 10/05/05

=> 10/05/06

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 58183**

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Item ID: D3278-1

Accept



Setup Start



Revision ID:

Item Name: Support

Stop



Start Date: 27/04/2010 Start Qty: 60.00



Cust Item ID:

Required Date: 04/05/2010 Req'd Qty: 60.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160  QC Quality Control	QC3- Inspect Part Finish  Memo	0.00  0.00							
170  Packaging Packaging	Identify as per dwg & Stock Location. <u>48</u>  Memo	0.00  0.00							
180  QC Quality Control	QC21- Final Inspection - Work Order Release  Memo	0.00  0.00							

② 10-5-6

10-5-6 600 SP

10/05/07 JF  
ME  
10-5-7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

April 27, 2010 1:42:59 PM

Page 1

Work Order ID: 58183

Parent Item: D3278-1

Parent Item Name: Support

Comments: IPP: ☐A04.04.190New issue0KJ/JLM0

IPP B 07.09.06 rev.c dwg EC verified by: JLM

Start Date: 27/04/2010

Required Date: 04/05/2010

Start Qty: 60.00

Required Qty: 60.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
M6061T6B1.000X02.00 0		Purchased	No			100	f	62.8300	14.7600			



6061-T6 Bar 1.00 x 2.00



Warehouse  
Location

Loc Qty

Loc Code

Main Warehouse

MAT

60

114415

60

Main Warehouse

MAT03

2.83

112567

2.83

14.76 + 5.13 = 19.89  
10/04/29

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	58183
<b>Description:</b> Support		<b>Part Number:</b>	D3278-1
<b>Inspection Dwg:</b> D3278	<b>Rev:</b> C	<b>Page 1 of 1</b>	

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.098	+0.005/-0.000	.100	✓			
0.359	+/-0.005	.361	✓			
0.609	+/-0.010	.614	✓			
0.250	+/-0.010	.251	✓			
1.480	+/-0.005	1.479	✓			
R0.125	+/-0.010	.125	✓			
0.119	+0.005/-0.004	.122	✓			
2.439	+/-0.010	2.438	✓			
1.980	+/-0.010	1.981	✓			
R0.13	+/-0.030	.125	✓			
Ø0.257	+0.005/-0.000	.259	✓			
R0.375	+/-0.010	.375	✓			
0.875	+/-0.010	.876	✓			
0.500	+/-0.010	.504	✓			
R0.400	+/-0.010	.400	✓			
R1.00	+/-0.030	1.00	✓			
1.720	+/-0.010	1.725	✓			
R0.125	+/-0.010	.125	✓			
0.125	+/-0.010	.128	✓			

<b>Measured by:</b>	SS	<b>Audited by:</b>	MWF	<b>Prototype Approval:</b>	N/A
<b>Date:</b>	10/05/01	<b>Date:</b>	10/05/05	<b>Date:</b>	N/A

Rev	Date	Change	Revised by	Approved
A	04.04.19	New Issue P/O D3278-041	KJ/JLM	
B	05.06.08	0.359 was 0.365; 0.119 was 0.125	KJ/JLM	
C	07.09.26	Dimensions updated per Dwg Rev. C	KJ/EC	AE

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC-Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

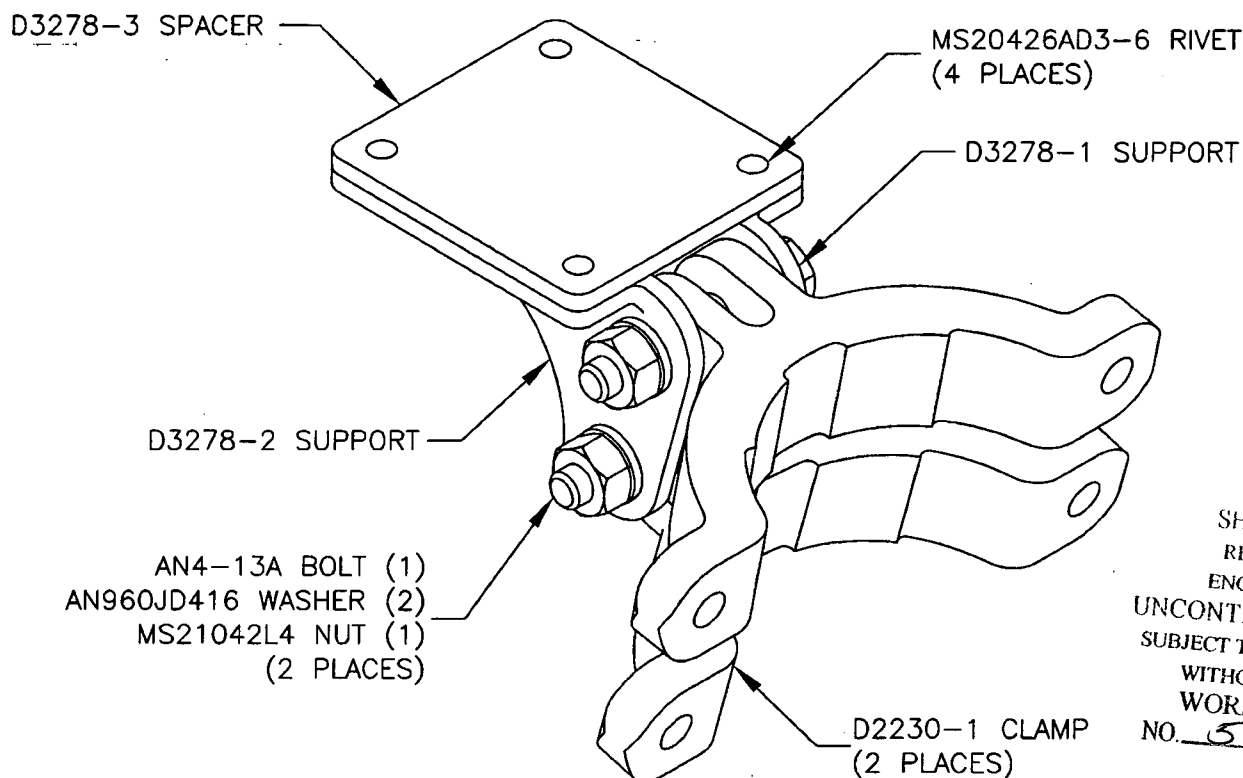
NOTE: Date & initial all entries



DESIGN <i>97</i>	DRAWN BY <i>BC</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>B</i>	APPROVED <i>H</i>	DRAWING NO. D3278	REV. C SHEET 1 OF 3
DATE 07.07.24		TITLE SUPPORT ASSEMBLY	SCALE NTS
A	04.03.03	NEW ISSUE	
B	05.03.31	CHANGE DIM/TOL TO ENSURE FIT	
C	07.07.24	CHANGED RIVETS PER PAR #185	

RELEASED  
*07-08-08*

## D3278-041 SUPPORT ASSEMBLY



SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. *58183*

*10-11-24*

Qty	Part Number	Description
X	D3278-041	SUPPORT ASSEMBLY
2	D2230-1	CLAMP
1	D3278-1	SUPPORT
1	D3278-2	SUPPORT
1	D3278-3	SPACER
2	AN4-13A	BOLT
4	AN960JD416	WASHER
4	MS20426AD3-6	RIVET
2	MS21042L4	NUT

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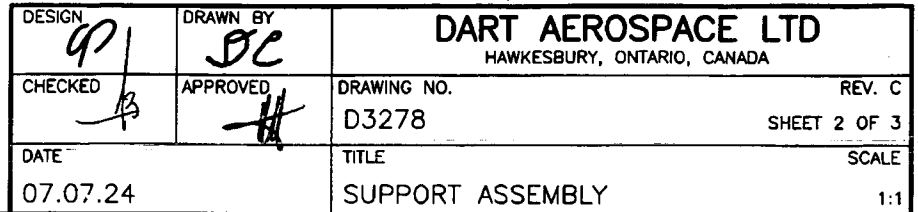
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

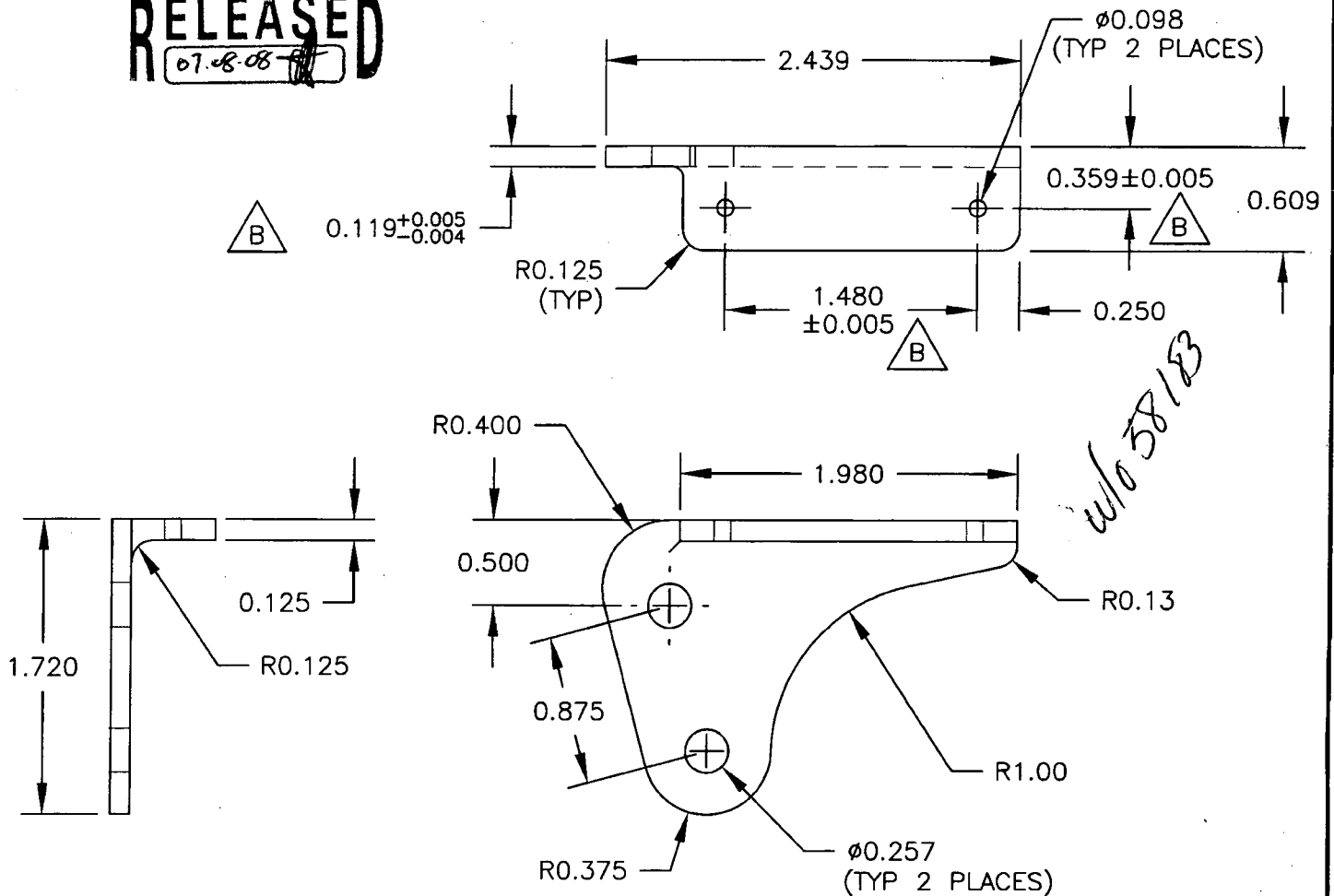
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



RELEASED  
07-08-08



**D3278-2 SUPPORT (OPPOSITE)**

- 1) MACHINE PER DWG FILE "D3278-1.SLDPRT"
- 2) MATERIAL: 6061-T6 (OR 6061-T651/T6510/T6511/T62) BAR  
PER AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)  
PER AMS-QQ-A-200/8 (OR AMS 4160)  
(REF. DART SPEC. M6061T6B)
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

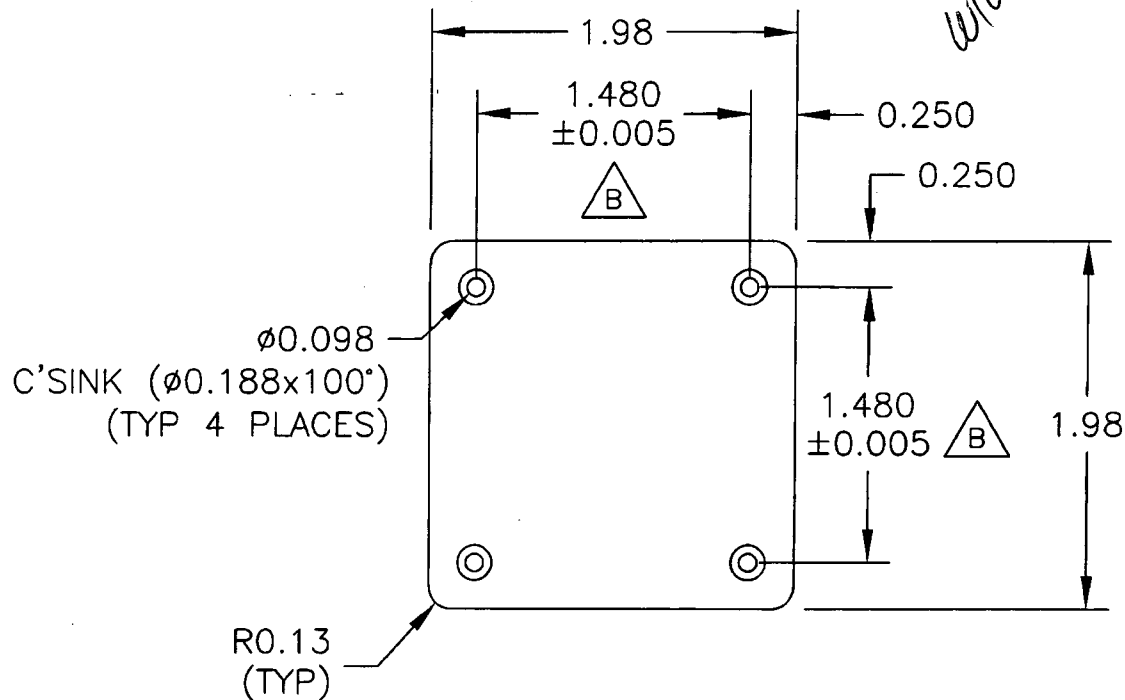
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**DART**

DESIGN <i>GP</i>	DRAWN BY <i>BC</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>B</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3278	REV. C SHEET 3 OF 3
DATE 07.07.24		TITLE SUPPORT ASSEMBLY	SCALE 1:1

**RELEASED**  
07.08.08**D3278-3 SPACER**

- 1) MATERIAL: DELRIN II 150E OR ACETRON GP ACETAL  
(REF. DART SPEC. M-DELRIN-B0.125x2.000) OR  
DELRIN II 150E OR ACETRON GP ACETAL  
(REF. DART SPEC. M-DELRIN-S.125)
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED

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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries